



Paul J. Diodati
Director

Commonwealth of Massachusetts

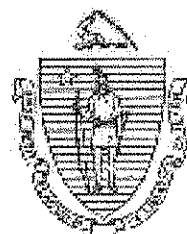
Division of Marine Fisheries

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September 17, 2004

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

Re: Docket No.: CP04-36-000, Weaver's Cove Energy LNG Import Terminal Project Draft
Environmental Impact Statement

Dear Secretary Salas:

Marine Fisheries has reviewed the Draft Environmental Impact Statement (DEIS) from Weaver's Cove Energy, LLC to conduct maintenance and improvement dredging and construct a liquefied natural gas (LNG) import terminal along the Taunton River in Fall River. We offer the following comments and resource information for your consideration.

Mount Hope Bay and the Taunton River provide valuable habitat for a diverse assemblage of finfish and invertebrates. In recognition of the extremely productive shellfish habitat and resources found within and adjacent to the proposed project footprint, these portions of the Taunton River have been characterized by *Marine Fisheries* as "Significant Shellfish Habitat" and are therefore afforded protection under the Massachusetts Wetlands Protection Act (310 CMR, 10.34). In addition, many diadromous fish species use all or some of the Taunton River for passage, spawning, nursery, and forage habitat. Many of these species provide forage for other predatory fish and may themselves be harvested by recreational and commercial fishermen. Finally, various life stages of numerous other finfish species transit and/or inhabit the river during the year.

As has been noted in previous correspondence to FERC staff and the State and Federal Regulatory agencies, the materials provided in support of the Weaver's Cove project have contained a number of unsupported conclusions, faulty and/or missing analyses, and invalid assumptions as to the potential impact to marine fisheries habitat and resources. Regrettably, this precedent is continued in the DEIS. Specifically:

- ☐ Estimates of the range and magnitude of potential negative impacts to finfish and shellfish very likely underestimate these effects as they are based on inadequate models that cannot accurately portray conditions within the river system due to inadequate data. The models do not include any inputs for turbidity/suspended solids during high flushing and/or low water flow periods because no such data were collected. Further, we continue to question the accuracy of a model that was only tested against the one month's data upon which the model was based. As this modeling is linked to a proposal to perform year-round dredging for three plus years, it seems reasonable to

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require the collection of multiple years' worth of data upon which to base the model.

- The failure of the DEIS to adequately consider appropriate time-of-year (TOY) work restrictions for all species at risk from the proposed activity should be addressed in a supplemental DEIS. Information regarding these species and the associated periods of concern were provided to the applicants and to FERC staff. The only mitigative measures discussed for the proposed dredging were applied to winter flounder spawning periods, and these do not even adequately protect that resource. There is no discussion of avoidance of impacts to the many diadromous species that move through the area, nor a realistic discussion of potential shellfish impacts. It is not possible to conduct continuous dredging for a period of three years in this system without causing substantial negative impacts to marine fisheries resources and habitat. A failure to address these avoidable impacts constitutes a violation of the regulations governing NEPA, MEPA, and CZM Federal Consistency.
- In a similar vein, the supplemental DEIS should contain discussion of actions to minimize and/or mitigate for the impacts likely to result by the regular passage of the LNG tanker and support vessels through the embayment. The recommendation to essentially ignore these impacts implicit in the DEIS is unacceptable.
- The use of spuds to anchor dredge barges during dredging does address potential concerns about anchor placement and chain sweep provided that no other types of anchoring systems will be used. However, the assertion that all spud placements will take place within the dredge footprint is not credible. No such level of precision is possible when using heavy construction equipment. The placement, management, and removal of spuds and any other anchors remains a concern for quahog habitat and resources found adjacent to the navigation channel.
- Proposals to perform one-time shellfish seeding and remove quahogs from the dredge footprint do not address the direct loss of habitat caused by dredging or the continuing impacts that are likely to result from vessel passage through the river.
- *Marine Fisheries* recommends that the supplemental DEIS include a more comprehensive discussion of the contribution that dredging and vessel operations associated with the Weaver's Cove project will make to the overall cumulative impacts visited upon the marine fisheries resources and habitats found in the Mount Hope Bay /Taunton River system. The DEIS does an adequate job of listing the many sources of impact found in this embayment, but fails to make the connection that any impact caused by the Weaver's Cove project will contribute to this total. Further, it is completely inappropriate to dismiss individual impacts because they appear to be smaller than other perturbations already occurring in the system.
- A more comprehensive discussion of the use of horizontal directional drilling (HDD) is warranted in the supplemental DEIS. The seeming rejection of this technique for use in the Taunton River is based on speculation and does not appear to reflect the state-of-the-art. Considerably more flexibility and range in the use of this technique were recently demonstrated during construction of the Hubline gas pipeline through Massachusetts Bay. The supplemental DEIS should reflect these and other recent advances.
- The DEIS contains virtually no discussion of the potential impacts from the withdrawal of millions of gallons of river water for ballast and hydrostatic testing other than a brief accounting of potential impingement/entrainment mortality. The regular withdrawal of such volumes of water needs to be discussed within the context of other similar activities within the embayment and with due consideration of the greater impact such activity may have during periods of drought or seasonal low water.

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- ☐ The supplemental DEIS should contain a more contemporary and comprehensive analysis of the potential for siting an offshore LNG terminal. Efforts in the Gulf of Mexico are considerably more advanced than as portrayed, and the proposal for an offshore terminal off the coast of Gloucester, Massachusetts is in the pre-application meeting phase.

Questions regarding this review may be directed to Vin Malkoski in our Pocasset office at (508) 563-1779, ext. 119.

Sincerely,



Paul J. Diodati
Director

cc: Representative David B. Sullivan
Mayor Edward Lambert, City of Fall River
Fall River Conservation Commission
Somerset Conservation Commission
Theodore Barton, Epsilon Associates
Tim Timmerman & Eric Nelson, US EPA
Chris Boelke, NMFS
John Felix, DEP
Alexander Strysky, MCZM
Hickey, Whittaker, Sawyer, & Brady, MDMF



Paul J. Diodati
Director
July 23, 2004

Commonwealth of Massachusetts

Division of Marine Fisheries

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Fall River Conservation Commission
1 Government Center
Fall River, MA 02722

Re: Mill River Pipeline Project Notice of Intent

Dear Commissioners:

Marine Fisheries has reviewed the Notice of Intent (NOI) from Mill River Pipeline, LLC to construct two 24-inch natural gas pipelines across and along the Taunton River in Fall River. We offer the following comments and resource information for your consideration.

- The Western Lateral appears to cross through highly productive quahog (*Mercenaria mercenaria*) habitat that serves as a source of quahogs for shellfish relays to Massachusetts towns for their propagation programs. Installation of the pipeline will disturb this habitat and may cause direct mortality within the project footprint.
- To minimize damage to the shellfish habitat, the use of less destructive installation techniques such as horizontal directional drilling should be considered.
- To avoid direct shellfish mortality, the applicant should coordinate with *Marine Fisheries*' Shellfish Program to remove shellfish from within the project footprint.
- The disturbed areas should be restored to pre-construction conditions and contours.
- The pipeline must be buried deep enough to allow performance of future dredging (shellfish and maintenance).
- Performance of this and any other in-water silt producing activity should coincide with appropriate no work time-of-year (TOY) and project sequencing windows as required for the Weaver's Cove Terminal Project.

Questions regarding this review may be directed to Vin Malkoski in our Pocasset office at (508) 563-1779, ext. 119.

Sincerely,

A handwritten signature in dark ink, appearing to read "Paul J. Diodati".

Paul J. Diodati
Director

cc: Theodore Barton, Epsilon Associates
Tim Timmerman & Eric Nelson, US EPA
Chris Boelke, NMFS
John Felix, DEP
Alexander Strysky, MCZM
Hickey, Whittaker, Sawyer, & Brady, MDMF

An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement
David M. Peters, Commissioner



Paul J. Diodati
Director

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July 23, 2004

Fall River Conservation Commission
1 Government Center
Fall River, MA 02722

Re: Weaver's Cove Energy LNG Import Terminal Project Notice of Intent

Dear Commissioners:

Marine Fisheries has reviewed the Notice of Intent (NOI) from Weaver's Cove Energy, LLC to conduct maintenance and improvement dredging and construct a liquefied natural gas (LNG) import terminal along the Taunton River in Fall River. We offer the following comments and resource information for your consideration.

The Taunton River provides valuable habitat for a diverse assemblage of finfish and invertebrates. In recognition of the extremely productive quahog (*Mercaenaria mercenaria*), soft shelled clam (*Mya arenaria*), and American oyster (*Crassostrea virginica*) resources found within and adjacent to the proposed project footprint, these portions of the Taunton River have been characterized by *Marine Fisheries* as "Significant Shellfish Habitat" and are therefore afforded protection under the Wetlands Protection Act (310 CMR, 10.34). Many diadromous fish species including blueback herring (*Alosa aestivalis*), alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), hickory shad (*Alosa mediocris*), gizzard shad (*Dorosoma cepedianum*), rainbow smelt (*Osmerus mordax*), white perch (*Morone americana*), striped bass (*Morone saxatilis*), American eel (*Anguilla rostrata*) and the endangered Atlantic sturgeon (*Acipenser oxyrinchus*) use all or some of the Taunton River for passage, spawning, nursery, and forage habitat. Many of these species provide forage for other predatory fish and may themselves be harvested by recreational and commercial fishermen. Finally, various life stages of numerous other finfish species such as winter flounder (*Pseudopleuronectes americanus*), Atlantic menhaden (*Brevoortia tyrannus*), tautog (*Tautoga onitis*), and bluefish (*Pomatomus saltatrix*) also transit and/or inhabit the river during the year.

The support material provided by Weaver's Cove LLC discusses some of these species and provides information on the various anthropogenic influences on their habitat. However, there are a number of unsupported assumptions and missing analyses. Specifically:

- *Marine Fisheries* is greatly concerned that the sediment modeling performed to evaluate potential fisheries impacts from dredging and construction is faulty and greatly underestimates these impacts. The very limited amount of field data collected for use in the model is inadequate when attempting to model for an activity that is proposed to occur year-round for up to three years. Additionally, there continues to be no inclusion of natural inputs such as rainfall, runoff, etc. The Taunton River receives inputs from many sources and the proposed dredging activity will contribute to the overall condition.

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David M. Peters, Commissioner

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DIVISION OF MARINE FISHERIES

NO. 7231 P. 2

- In part due to the underestimation of potential impacts that resulted from the use of a faulty model, the proposed dredging/construction restrictions offered in place of traditional no work time-of-year (TOY) windows and project sequencing within the Taunton River are unacceptable. Appropriate TOY windows would be as follows:
 - Anadromous Species:
 - Alewife, Inward migration - Mid-March through Mid-June 15
 - Atlantic sturgeon, Inward migration - April through June
 - Blueback herring, Inward migration - April 15 through July 30
 - Rainbow smelt, Inward migration - March 1 through May 15
 - White perch, Inward migration - March through May
 - Alewife, Outward migration - June 15 through October 1
 - Atlantic sturgeon, Outward migration - June through November
 - Blueback herring, Outward migration - September through early November
 - Catadromous Species:
 - American eel - Elver (juveniles) inward migration - March 15 through June 15
 - Shellfish:
 - American oyster, Spawning (may occur twice per year) Mid-June through September 15
 - Quahog, Spawning (may occur twice per year) Mid-June through September 15
 - Soft-shell clam Spawning (may occur twice per year) May through October
 - Winter flounder
 - Spawning and larval development - Mid-January through May
 - Juvenile settlement and development - May through September
- As has been noted by *Marine Fisheries* and NOAA Fisheries in other correspondence, the description of potential winter flounder spawning habitat is incorrect and greatly underestimates the amount of area that may be permanently altered. The applicant's claims that the Turning Basin area is too deep for successful winter flounder spawning and egg deposition have no basis.
- The NOI does not address the non-excavation impacts of dredging. The placement, management, and removal of the various spuds, anchors, and chain sweeps needed to secure the barges and other vessels involved in a large dredging project may impact an area many times larger than the actual dredge footprint. This is of great concern for quahog habitat and resources found adjacent to the channel.
- There is a singular lack of discussion regarding the cumulative impacts that construction and operation of this facility will have on these highly stressed species and habitat. Planned dredging will result in the permanent loss of productive shellfish habitat and may further disrupt fish passage and spawning activity. Additionally, claims that dredging/construction impacts will be temporary in nature cannot be supported when discussing a nearly continuous three-year construction cycle, followed by the weekly passage of ships large enough to resuspend sediments along the entire portion of the Mount Hope Bay/Taunton River passage.
- The regular passage of LNG tankers to the planned Weaver's Cove facility will likely cause additional impacts via the resuspension of sediments during transit. Such events have been observed following the passage of the smaller coal ships to Brayton Point and passage of LNG tankers through Boston Harbor. Wilber & Clarke (2001)¹ reported that the passage of very large vessels through dredged channels could increase suspended sediments up to 5x the background levels. Increased turbidity can greatly hinder fish spawning and larval survival, and can retard juvenile development. Benthic invertebrates such as clams and quahogs can become deeply

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buried or suffer mortality caused by clogging of their respiratory systems. This issue is not addressed in the NOI.

- Previous documents provided by the applicant detailed the use of public landings and rights of way in the Mount Hope Bay area as staging areas for construction and dredging activities. The extent and duration of the loss of public access caused by these activities is not discussed in the NOI.
- Similarly, Mount Hope Bay supports extensive recreational boating and fishing activity during the warmer months that may be disrupted by the presence of large dredge barges and support craft.

Questions regarding this review may be directed to Vin Malkoski in our Pocasset office at (508) 563-1779, ext. 119.

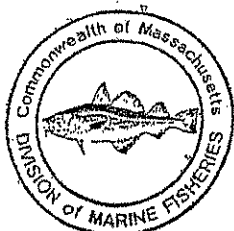
Sincerely,

David J. McKeeman for

Paul J. Diodati
Director

cc: Representative David B. Sullivan
Mayor Edward Lambert, City of Fall River
David Swearingen, FERC
Brian Valiton, USACE
Theodore Barton, Epsilon Associates
Tim Timmerman & Eric Nelson, US EPA
Chris Boelke, NMFS
John Felix, DEP
Alexander Strysky, MCZM
Hickey, Whittaker, Sawyer, & Brady, MDMF

¹Literature cited: Wilber, D.H. and D.G. Clarke. 2001. Biological effects of suspended sediments: a review of suspended sediment impacts on fish and shellfish with relation to dredging activities in estuaries. *North American Journal of fisheries Management* 21:855-875.



Paul J. Diodati
Director

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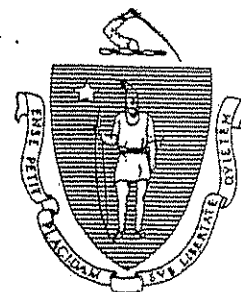
Division of Marine Fisheries

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June 8, 2004

Mitch Ziencina
Department of Environmental Protection
Wetlands and Waterways Program
20 Riverside Drive
Lakeville, MA 02347

Re: Weaver's Cove Energy LNG Import Terminal Dredging Chapter 91 Waterways
License Application (#W050847)

Dear Mr. Ziencina:

The Division of Marine Fisheries (*Marine Fisheries*) has reviewed the Chapter 91 Waterways License (Ch 91) Application from Weaver's Cove Energy, LLC to conduct maintenance and improvement dredging during the construction of a liquefied natural gas (LNG) import terminal along the Taunton River in Fall River. We offer the following comments and resource information for your consideration.

As noted in previous correspondence, the Taunton River provides valuable habitat for a diverse assemblage of finfish and invertebrates. In recognition of the extremely productive quahog (*Mercenaria mercenaria*), soft shelled clam (*Mya arenaria*), and American oyster (*Crassostrea virginica*) found within and adjacent to the proposed project footprint, these portions of the Taunton River have been characterized by *Marine Fisheries* as "Significant Shellfish Habitat" and therefore afforded protection under the Wetlands Protection Act (310 CMR, 10.34).

In addition, diadromous fish species including blueback herring (*Alosa aestivalis*), alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), hickory shad (*Alosa mediocris*), gizzard shad (*Dorosoma cepedianum*), rainbow smelt (*Osmerus mordax*), white perch (*Morone americana*), striped bass (*Morone saxatilis*), American eel (*Anguilla rostrata*) and the endangered Atlantic sturgeon (*Acipenser oxyrinchus*) use all or some of the Taunton River for passage, spawning, nursery, and forage habitat. Many of these species provide forage for other predatory fish and may themselves be harvested by recreational and commercial fishermen. Finally, various life stages of numerous other finfish species such as winter flounder (*Pseudopleuronectes americanus*), Atlantic menhaden (*Brevoortia tyrannus*), tautog (*Tautoga onitis*), and bluefish (*Pomatomus saltatrix*) also transit and/or inhabit the river during the year.

- *Marine Fisheries* is concerned that the sediment modeling performed to evaluate potential fisheries impacts from dredging and construction underestimates these impacts. The amount of field data collected for use in the model is inadequate when attempting to model for an activity that is proposed to occur year-round for up to three years. Additionally, there continues to be no inclusion of natural inputs such as rainfall, runoff, etc. The Taunton River receives inputs from many sources and the proposed dredging activity will contribute to the overall condition.
- Underestimation of potential impacts resulting from use of this model does not support the proposed dredging/construction restrictions offered in place of traditional time-of-year (TOY) windows and project sequencing within the Taunton River.
- As has been noted by *Marine Fisheries* and NOAA Fisheries, the description of potential winter flounder spawning habitat is incorrect and greatly underestimates the amount of area that may be altered. The applicant's claims that the Turning Basin area is too deep for successful winter flounder spawning and egg deposition have no basis.
- The regular passage of LNG tankers to the planned Weaver's Cove facility will likely cause additional impacts via the resuspension of sediments during transit. Such events have been observed following the passage of the smaller coal ships to Brayton Point and passage of LNG tankers through Boston Harbor. Wilber & Clarke (2001) reported that the passage of very large vessels through dredged channels can increase suspended sediments up to 5x the background levels. Increased turbidity can greatly hinder fish spawning and larval survival, and can retard juvenile development. Benthic invertebrates such as clams and quahogs can become deeply buried or suffer mortality caused by clogging of their respiratory systems. This issue is not addressed in the Ch 91 application.
- Claims that dredging/construction impacts will be temporary and minimal in nature cannot be supported when discussing a nearly continuous three-year dredging/construction cycle, followed by the weekly passage of ships large enough to resuspend sediments along the entire Mount Hope Bay/Taunton River passage. This is particularly problematic when evaluating potential impacts to fishing and fowling and the habitats that support these resources.
- Previous documents provided by the applicant detailed the use of public landings and rights of way in the Mount Hope Bay area as staging areas for construction and dredging activities. The extent and duration of the loss of public access caused by these activities is not discussed in the Ch 91 application package.
- Similarly, Mount Hope Bay supports extensive recreational boating and fishing activity during the warmer months that may be disrupted by the presence of large dredge barges and support craft.

Literature cited: Wilber, D.H. and D.G. Clarke. 2001. Biological effects of suspended sediments: a review of suspended sediment impacts on fish and shellfish with relation to dredging activities in estuaries. North American Journal of fisheries Management 21:855-875.

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Sincerely,



Paul J. Diodati
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